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REMARKS

Applicant has carefully reviewed the Office Action mailed March 16, 2007. In response to the Office Action, no claims have been amended. Claim 8 was previously cancelled. Accordingly, claims 1-7, and 9-21 remain pending in this application. At least for the reasons set forth below, Applicant respectfully traverses the foregoing rejections. Further, Applicant believes that there are also reasons other than those set forth below why the pending claims are patentable, and reserves the right to set forth those reasons, and to argue for the patentability of claims not explicitly addressed herein, in future papers. Applicant respectfully requests reconsideration of the present application in view of the above amendment, the new claims, and the following remarks.

Inertia vs. Torque

The Examiner's rejections rely upon the assertion that "the disclosed driveline inertia in the instant application represents a torque". (Final Office Action mailed March 16, 2007, page 14, line 4). However, torque (a vector) is a measure of angular force, whereas inertia is, generally, the tendency of an object to stay in motion (resistance to changes in momentum). Therefore, an item at rest can have a magnitude of inertia (measured in ft lb-mass) and zero torque (measured in ft lb-force). While inertia and torque may be represented in similar units, Creger is helpful in demonstrating that lb-mass multiplied by acceleration (measured in feet per second-squared) yields lb-force.

Creger explicitly states that the torque calculated therein is the torque created in the engine and transmitted to the wheels through the torque converter and driveline. (See generally, Creger, column 2, line 49 to column 3, line 25, and column 5, lines 20-65). More specifically, Creger clearly states that "$T_{DRIVELINE\text{-}INERTIA\text{-}N}$ is the torque due to accelerating inertia seen by the driveline and is determined by the equation: $T_{DRIVELINE\text{-}INERTIA\text{-}N} = I_{MN} \cdot$ ACCELERATION." (Creger, Column 5, lines 57-60) Accordingly, Creger teaches that when a driveline has no acceleration, then the driveline has no torque component due to the inertia of driveline components ($T_{DRIVELINE\text{-}INERTIA\text{-}N}$), regardless of the magnitude of the driveline inertia.

Further, the Examiner states Creger teaches that "torque (driveline inertia) is proportional to the already determined acceleration." (Final Office Action mailed March 16, 2007, page 14, line 11). To draw this conclusion, the Examiner contends that "torque (driveline inertia) can be determined by multiplying I_{MN} and the determined acceleration." (Final Office Action mailed March 16, 2007, page 14, lines 12-13). However, if inertia is proportional to acceleration, then torque must be a constant, and Creger clearly teaches that torque is a variable for an engine. Revealingly, the Examiner reinforces this by admitting that Creger teaches monitoring the variable torque values. (Final Office Action mailed March 16, 2007, page 4, lines 2-3, *see also*, Creger, Abstract)

Claim Rejections – 35 U.S.C. § 103

Claims 1-5, 7, 9, 10, 12-15, and 17-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Eaton Corporation (hereinafter "Eaton"), "Eaton Truck Components Bulletin, TRIB-9701", 1997, including the DAA program; in view of *Creger*, US 5,848,371. Applicant respectfully traverses the rejection.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j).

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out by the reference." *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

Independent Claims 1, 7 and 12

Independent claims 1, 7 and 12 positively recite "determining an inertia of the vehicle driveline based on the entered measurements." The Examiner admits that "Eaton fails to expressly disclose determining an inertia of the vehicle driveline." (Final Office Action mailed March 16, 2007, page 3, lines 5-6) The Examiner contends that Creger teaches that "as shown in equation 9, driveline inertia is determined by multiplying I_{MN} and ACCELERATION" (Id. Page 6, lines 12-14)

However, and in direct contrast to the assertions by the Examiner, Creger teaches in Equation 9 that torque may be calculated by multiplying I_{MN} and ACCELERATION. (See Creger column 5, lines 56-60, demonstrating that Equation 9 provides "$T_{DRIVELINE-INERTIA-N}$ is the torque.")

Additionally, the Examiner contends that Creger teaches that "the relationship between driveline inertia and ACCELERATION is I_{MN}, which is a calculated constant." (Final Office Action mailed September 25, 2006, page 6, lines 15-16) However, a close reading of Creger reveals that **I_{MN} is inertia** and 'the relationship between torque and ACCELERATION is I_{MN}'. Accordingly, driveline inertia is not taught in Creger to be proportional to acceleration, which is the basis for the Examiner's incorrect conclusion that Equation 9 of Creger teaches determining inertia.

The Examiner is correct in that Creger teaches "I_{MN} is a calculation based upon predetermined lumped inertia constants and gear reductions." (Final Office Action mailed March 16, 2007, page 3, lines 12-13) However, this specific teaching of Creger clearly demonstrates that Creger teaches that inertia is a constant for the purposes of the torque determination of Creger. Nowhere in Creger is inertia determined by using measurements.

Furthermore, Equation 10 of Creger teaches away from "determining an inertia of the vehicle driveline based on the entered measurements," by illustrating in Equation 10 that inertia is determined by summing lumped inertia constants. Creger does not teach determining an inertia based upon measurements, but based upon known constants for a known driveline configuration. Accordingly, one of skill in the art would recognize that Creger would not be useful in "determining an inertia of the vehicle driveline based on the entered measurements," since Creger does not mention this determination or provide any direction on how to make this determination. Thus, the combination of Eaton and Creger does not teach every limitation of independent claims 1, 7, and 12, as required in *In re Royka*.

Dependent claims 2-5, 9, 10, 13-15, and 17-21 teach independently patentable subject matter, although they are also patentable merely by being dependent on an allowable base claim. As an example, claim 20 recites "wherein the driveline inertia is a coast inertia," whereas the Examiner has not articulated any teaching within the prior art that includes the term 'coast'. As

another example, claim 13 recites "enabling a user to interactively change the entered measurements of the desired vehicle driveline configuration to determine the torsional acceleration of the vehicle driveline configuration."

Motivation

Moreover, the Examiner has not identified any motivation within either Creger or Eaton for the proposed combination, but has supplied a motivation as "to obtain the invention as specified in claim 1 because torque (driveline inertia) is proportional to the already determined acceleration." As detailed above, this purported teaching of Creger does not exist in Creger. Further, the contention that inertia is proportional to acceleration is incorrect since inertia is a property of the specific configuration of an item, including geometry and mass, and acceleration of a driveline, as taught in Creger, is purely dependent upon the change in speed and is not taught to be proportional to inertia. Most importantly, in order for two values to be proportional, there must be some constant multiplier to establish the proportional relationship, which would require that torque be a constant, which is explicitly ruled out in Creger (Creger, Column 6, lines 60-63). Additionally, and as detailed above, torque is not driveline inertia.

Error within Creger

In rejecting the claims, the Examiner relies upon Equation 9 of Creger. (Final Office Action mailed March 16, 2007, page 3, line 11). Applicant has noted, and the Examiner has agreed, that the text of Creger that explains the application of Equation 9 of Creger has an error. Specifically, the text of Creger immediately following Equation 9 is incorrect in that Creger states that torsional acceleration is "the second derivative of speed." (Creger, Column 5, lines 62-65) However, torsional acceleration is the ***first*** derivative of speed. Applicant respectfully submits that at least Equation 9 of Creger is non-enabling (see MPEP § 2121). Accordingly, one of skill in the art would not likely rely upon Creger for any teachings associated with Equation 9 in light of this error.

The Examiner has stated that a "glaring error would not be a problem" for one of skill in the art. (Final Office Action mailed March 16, 2007, page 14, lines 19-22). To be clear, Applicant is not only concerned with whether one of skill in the art would recognize the error, but also with whether one of skill in the art would, upon finding the error, rely in whole or in part on the reference for any reason. The Examiner is kindly requested to supply some authority for the proposition that one of skill in the art would rely upon the teachings of a reference after an error has been discovered in the teachings of the reference necessary for the Examiner's rejection, in light of MPEP 2121.

Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

Conclusion

In view of the above remarks, the pending application is in condition for allowance. If, however, there are any outstanding issues that can be resolved by telephone conference, the Examiner is earnestly encouraged to telephone the undersigned representative.

It is believed no fees are due with this response. However, if any fees are required in connection with the filing of this paper that are not identified in any accompanying transmittal, permission is given to charge our Deposit Account No. 18-0013, under Order No. 65856-0025 from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. §1.136 is hereby made, the fee for which should also be charged to this Deposit Account.

Dated: May 15, 2007

Respectfully submitted,

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Amendment (10 pages)